RISC PC

Data Sheet 19
RISC OS 3 Version 3.5 to 3.1 comparison

April 1994

RISC OS 3 has been extended to support the Acorn Risc PC and to take full advantage of the features its hardware offers: the result is Version 3.5.

The first thing you will notice about Version 3.5 is that it not only makes use of the NewLook 3D desktop, but adds a proportional font to the desktop, replacing the System font used previously.

A new Display Manager provides the user interface to the greatly enhanced video performance offered by the VIDC20 controller chip in the Risc PC, replacing the Mode option on the Palette icon in previous versions of RISC OS. You no longer have to remember screen modes: click on the Display Manager icon and you can set the number of colours you want and choose from the possible screen resolutions available. A new Colour Picker (described in *SVGA in 16 million colours* - data sheet 15) provides a standard way to choose colours across different applications, using three different colour models - RGB, CMYK and HSV.

The Apps icon still appears on the left-hand side of the icon bar and applications may still be loaded from here, although they are actually no longer in ROM in the Risc PC. As all Risc PC models are fitted with hard discs, it made sense to move applications there, and use the extra ROM space for the new features added to RISC OS. Because applications in the Apps directory are now accessed from the hard disc rather than the ROM, you can easily tailor the contents of the Apps directory to suit your own way of working.

Particular attention has been paid in the Risc PC to data security. The lockable case has been mentioned in *Versatile modular case design* - data sheet 14, and this

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protection extend to software as well. A new feature of RISC OS 3 Version 3.5 is FSLock - file locking - which gives you password protection for your data. Another module, VProtect (written by Pineapple Software), protects the computer from infection by viruses. If you are about to load a virus known about by VProtect, it halts the action and displays a banner giving you warning. A virus killer is available separately from Pineapple Software.

DRAM has increased dramatically from the 4MB of the A5000 to up to 256MB (+2MB VRAM) in the Risc PC. RISC OS has been extended to handle this greatly increased memory: Version 3.5 is capable of handling up to 256MB of RAM, once large enough SIMMs become available commercially.

In previous versions of RISC OS, memory management was divided between the kernel and the Wimp. The kernel ordered the memory into dynamic areas and an application space; the Wimp then used a free pool and multiple application spaces, rather than just one application space which had all spare memory in it. In Version 3.5, the free pool memory is managed by the kernel, and the Wimp manages the multiple application spaces; it is responsible for constructing and managing tasks in the desktop. The Wimp's operation is simplified, as it no longer needs to maintain its own free pool.

There is also full support for a second bus-mastering processor to access system memory co-operatively.

The serial and parallel device drivers have been changed in Version 3.5 to optimise their performance with the new hardware, the parallel device being capable of being opened either for input or output.

The speed of the Serial port has been increased to 115K baud in the desktop.

The Acorn keyboard interface has been removed from the kernel and replaced by a standard PC PS2-style keyboard driver as a separate module. The standard quadrature mouse driver is now also a module, and a serial mouse driver has been added to allow a PC-type mouse to be connected to the Serial port. You can now add your own driver modules to cater for a wide range of alternative input devices.

The Acorn Risc PC includes a new expansion card architecture, and RISC OS has been extended to support the new 32-bit wide data paths, 16MB address space for each card and a dedicated Network card interface. Acorn Universal Networking (AUN) software is provided as part of the operating system.

A number of new applications are bundled with RISC OS 3 Version 3.5, including ARPlayer to play Replay movies (plus four movies with wildlife and recreation themes) and over a hundred high-quality colour images. These images are supplied in industry-standard JPEG format and are decompressed automatically and transformed into RISC OS sprites by ChangeFSI as they are loaded.

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